

(1) mixing a dispersion of said vegetable protein material with said fungal culture wherein said fungal culture is in a form of liquid koji;

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(2) subjecting said vegetable protein material to enzymatic hydrolysis with said fungal culture first at a temperature ranging from 15 °C to 39 °C with aeration and agitation; and

(3) completing said enzymatic hydrolysis of said vegetable protein material at a temperature ranging from 40 °C to 60 °C, to obtain said hydrolyzed protein.

8. (New) The method of Claim 7, wherein said vegetable protein material is selected from the group consisting of wheat gluten, corn gluten, de-fatted soybean, and treated products thereof.

9. (New) The method of Claim 7, wherein said enzymatic hydrolysis of said vegetable protein material at a temperature ranging from 15 °C to 39 °C is shifted to a temperature ranging from 40 °C to 60 °C when from 10 % to 60 % of the total period of time required for completion of the enzymatic hydrolysis has passed.

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Cont.
10. (New) The method of Claim 7, wherein said enzymatic hydrolysis of said vegetable protein material at a temperature ranging from 15 °C to 39 °C is shifted to a temperature ranging from 40 °C to 60 °C so that a ratio of reducing sugars present in said

13. (New) The method of Claim 7, wherein said fungal culture is prepared in a submerged culture tank-type reaction vessel and said enzymatic hydrolysis of said vegetable protein material is conducted in a submerged culture tank-type reaction vessel.

14. (New) The method of Claim 7, wherein said vegetable protein material is prepared for said enzymatic hydrolysis by a method comprising:

(a) pulverizing a vegetable protein material which exists at least partially in a solid state to a size of 300 μ m or less, to obtain pulverized vegetable protein material;

(b) dispersing said pulverized vegetable protein material in hot water at a temperature higher than 80 °C, to obtain a vegetable protein material dispersion;

(c) substantially removing air bubbles from said vegetable protein material dispersion; and

(d) subjecting said vegetable protein material dispersion to sterilization immediately after said air bubbles have been substantially removed.

15. (New) The method of Claim 14, wherein said vegetable protein material is selected from the group consisting of wheat gluten, corn gluten, de-fatted soybean, and treated products thereof.

16. (New) The method of Claim 14, wherein said enzymatic hydrolysis of said vegetable protein material at a temperature ranging from 15 °C to 39 °C is shifted to a temperature ranging from 40 °C to 60 °C when from 10 % to 60 % of the total period of time required for completion of the enzymatic hydrolysis has passed.

17. (New) The method of Claim 14, wherein said enzymatic hydrolysis of said vegetable protein material at a temperature ranging from 15 °C to 39 °C is shifted to a temperature ranging from 40 °C to 60 °C so that a ratio of reducing sugars present in said hydrolyzed protein obtained at the completion of said enzymatic hydrolysis is 5 % by weight

or less based on the total solid content in said hydrolyzed protein.

18. (New) The method of Claim 14, wherein said fungal culture is prepared in a submerged culture tank-type reaction vessel.

19. (New) The method of Claim 14, wherein said enzymatic hydrolysis of said vegetable protein material is conducted in a submerged culture tank-type reaction vessel.

20. (New) The method of Claim 14, wherein said fungal culture is prepared in a submerged culture tank-type reaction vessel and said enzymatic hydrolysis of said vegetable protein material is conducted in a submerged culture tank-type reaction vessel.

21. (New) The method of Claim 7, wherein said vegetable protein material is selected from the group consisting of wheat gluten and de-fatted soybean.

22. (New) The method of Claim 7, wherein said vegetable protein material is subjected to enzymatic hydrolysis with said fungal culture first at a temperature ranging from 25 °C to 38 °C with aeration and agitation.

23. (New) The method of Claim 7, wherein said enzymatic hydrolysis of said vegetable protein material is completed at a temperature ranging from 41 °C to 50 °C.

24. (New) The method of Claim 7, wherein said vegetable protein material is subjected to enzymatic hydrolysis with said fungal culture first at a temperature ranging from 25 °C to 38 °C with aeration and agitation, and wherein said enzymatic hydrolysis of said vegetable protein material is completed at a temperature ranging from 41 °C to 50 °C.

25. (New) The method of Claim 7, wherein said enzymatic hydrolysis of said vegetable protein material at a temperature ranging from 15 °C to 39 °C is shifted to a temperature ranging from 40 °C to 60 °C so that a ratio of reducing sugars present in said hydrolyzed protein obtained at the completion of said enzymatic hydrolysis is 3 % by weight or less based on the total solid content in said hydrolyzed protein.

26. (New) The method of Claim 7, wherein said enzymatic hydrolysis of said vegetable protein material at a temperature ranging from 15 °C to 39 °C is shifted to a temperature ranging from 40 °C to 60 °C so that a ratio of reducing sugars present in said hydrolyzed protein obtained at the completion of said enzymatic hydrolysis is 1.5 % by weight or less based on the total solid content in said hydrolyzed protein.

SUPPORT FOR THE AMENDMENTS

Applicants have rewritten Claims 1-6 as new Claims 7-14 to obviate the criticisms outlined on page 2-3 of the Official Action. Accordingly, support for Claims 7-14 can be found in Claims 1-6, as originally filed. Specific support for Claims 11-13 can be found in Claim 5, as originally filed.

Applicants have also added new Claims 15-26. Support for Claims 15-20 can be found in Claims 2-6, as originally filed. Support for Claim 21 can be found on page 9, lines 5-7, of the specification. Support for Claims 22-24 can be found on page 17, lines 19-25, of the specification. Support for Claims 25 and 26 can be found on page 20, lines 15-17, of the specification.

No new matter has been added. Claims 17-26 are active in this application.

REMARKS

Present Claims 7-26 relate to method for producing hydrolyzed protein by subjecting a vegetable protein material containing saccharides to enzymatic hydrolysis using a fungal culture in a liquid reaction system, comprising:

(1) mixing a dispersion of the vegetable protein material with the fungal culture wherein the fungal culture is in a form of liquid koji;